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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/881,209	06/15/2001	Johan Bergenudd	2466-98	5123
7590 08/03/2005 NIXON & VANDERHYE P.C. 1100 North Glebe Road, 8th Floor Arlington, VA 22201			EXAMINER WU, RUTAO	
			ART UNIT 3639	PAPER NUMBER

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/881,209	Applicant(s) BERGENUDD, JOHAN	
	Examiner Rutao Wu	Art Unit 3639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because "(Fig. 2)" is in the abstract. Correction is required. See MPEP § 608.01(b).
2. Claims 5 and 11 are objected to because of the following informalities: The claims are missing a period. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. Claims 4, 5, 10, 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
2. Claim 4 recites the limitation "the tick size" in line 1 and line 3. There is insufficient antecedent basis for this limitation in the claim.
3. Claim 4 recites the limitation "the valid price interval" in line 2. There is insufficient antecedent basis for this limitation in the claim.
4. Claim 4 recites the limitation "the optimum price" in line 3. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 4 recites the limitation "the multiplier" in line 4. There is insufficient antecedent basis for this limitation in the claim.
6. Claim 5 recites the limitation "the tick size" in line 1. There is insufficient antecedent basis for this limitation in the claim.

7. Claim 5 recites the limitation "the valid price interval" in line 2. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 5 recites the limitation "the corresponding product combination tick size" in line 3. There is insufficient antecedent basis for this limitation in the claim.
9. Claim 10 recites the limitation "the tick size" in line 2 and 3. There is insufficient antecedent basis for this limitation in the claim.
10. Claim 10 recites the limitation "the optimum price" in line 2. There is insufficient antecedent basis for this limitation in the claim.
11. Claim 10 recites the limitation "the multiplier" in line 3. There is insufficient antecedent basis for this limitation in the claim.
12. Claim 10 recites the limitation "the valid price interval" in line 4. There is insufficient antecedent basis for this limitation in the claim.
13. Claim 11 recites the limitation "the tick size" in line 4. There is insufficient antecedent basis for this limitation in the claim.
14. Claim 11 recites the limitation "valid price interval" in line 5. There is insufficient antecedent basis for this limitation in the claim.
15. Claim 11 recites the limitation "the corresponding product combination tick size" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Regarding the above rejections. Claims 4, 5, 10 and 11 are worded in such a way that it is difficult to understand; therefore the examiner cannot apply a prior art rejection.

Claim Rejections - 35 USC § 101

16. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

17. Claims 1-6 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. A claim limited to a machine or manufacture which has practical application in the technological arts is statutory. In most cases, a claim to a specific machine or manufacture will have practical application in the technological arts. See MPEP 2106, 2100-14 (quoting *In re Alappat*, 33 F.3d at 1544, 31 USPQ2d at 1557). Additionally, for subject matter to be statutory, the claimed process must be limited to a practical application of the abstract idea or mathematical algorithm in the technological arts. See *In re Alappat* 33 F.3d at 1543, 31 USPQ2d at 1556-57 (quoting *Diamond V. Diehr*, 450 U.S. at 192, 209 USPQ at 10). For a process claim to pass muster, the

recited process must somehow apply, involve, use, or advance the technological arts.

See *In re Musgrave*, 431 F.2d 882, 167 USPQ 280 (CCPA 1970).

In the present case, claims 1-6 only recite an abstract idea. The recited steps of allowing different prices for sub-contracts and prices for the individual sub-contracts are calculated product by product, also given a net price for the combination contract a valid price point can be found for each sub-contract that satisfies a valid tick size does not apply, involve, use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper. These steps only constitute an idea of how to calculate prices of sub-contract that satisfies certain conditions.

As to technological arts recited in the preamble, mere recitation in the preamble (i.e., intended or field of use) or mere implication of employing a machine or article of manufacture to perform some or all of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the claim as a whole to breathe life and meaning into the preamble. In the present case, none of the recited steps are directed to anything in the technological arts as explained above with the exception of the recitation in the preamble that the method is "for an automated exchange". Looking at the claim as a whole, nothing the body of the claim recites any structure or functionality to suggest that a computer performs the recited steps. Therefore, the preamble is taken to merely recite a field of use.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. An invention, which is eligible or

patenting under 35 U.S.C. 101, is in the “useful arts” when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The fundamental test for patent eligibility is thus to determine whether the claimed invention produces a “use, concrete and tangible result”. See *AT&T v. Excel Communications Inc.*, 172 F.3d at 1358, 50 USPQ2d at 1452 and *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d at 1373, 47 USPQ2d at 1601 (Fed. Cir. 1998). The test for practical application as applied by the examiner involves the determination of the following factors”

(a) “Useful” – The Supreme Court in *Diamond v. Diehr* requires that the examiner look at the claimed invention as a whole and compare any asserted utility with the claimed invention to determine whether the asserted utility is accomplished. Applying utility case law the examiner will note that:

- i. the utility need not be expressly recited in the claims, rather it may be inferred.
- ii. if the utility is not asserted in the written description, then it must be well established.

(b) “Tangible” – Applying *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994), the examiner will determine whether there is simply a mathematical construct claimed, such as a disembodied data structure and method of making it. If so, the claim involves no more than a manipulation of an abstract idea and therefore, is nonstatutory under 35 U.S.C. 101. In *Warmerdam* the abstract idea of a data structure became capable of

producing a useful result when it was fixed in a tangible medium, which enabled its functionality to be realized.

- (c) "Concrete" – Another consideration is whether the invention produces a "concrete" result. Usually, this question arises when a result cannot be assured. An appropriate rejection under 35 U.S.C. 101 should be accompanied by a lack of enablement rejection, because the invention cannot operate as intended without undue experimentation.

In the present case, the claimed invention produces a method (i.e., repeatable) used in determining the valid price and quantity of sub-contracts within a combinational contract (i.e., useful and tangible).

Although the recited process produces a useful, concrete, and tangible result, since the claimed invention, as a whole, is not within the technological arts as explained above, claims 1-6 is deemed to be directed to non-statutory subject matter.

Claim Rejections - 35 USC § 102

18. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

19. Claims 1, 2, 7, 8 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,412,287 to Braddock, III (hereafter referred to as Braddock).

Braddock states a computation system that includes all the limitations recited in claims 1 and 7. See column 3 lines 3 to 10 portions of the specification.

Referring to claims 1 and 7:

- allowing the prices for at least the first number of the sub-contracts to be different. Braddock states all of the buy orders are collected, broken down into 100 share orders and sequenced first by price from highest to lowest, and second, by time of order. A similar sequence is made of sell orders from the lowest price to the highest price. (column 3, lines 3 to 7)
- determining the price of the individual sub-contracts using different prices for at least the first number of the sub-contracts. Braddock states the lists are then compared matching the first round lot buy (at the highest price) with the first round lot sell (at the lowest price). (column 3, lines 8 to 10)

Braddock describes the NASDAQ system that includes all the limitations recited in claims 2 and 8. See column 2 lines 15 to 19 portions of the specification.

Referring to claims 2 and 8:

- the prices for the individual sub-contracts are calculated product by product. Braddock states that with the NASDAQ system, for every stock, there are several association members who are market makers. Each of them communicate with the system, transmitting their bids and offers. The system re-sequences all of these quotes to display the lowest five offers and highest five bids. (column 2, lines 15 to 19)

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 3, 6, 9, 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Braddock in view of U.S. Patent No. 6,035,287 to Stallaert et al (hereafter referred to as Stallaert).

Braddock within his patent discloses The Nymeyer system and the NASDAQ trading system as to allowing different products to be traded at different price points and that the price for an order of product is calculated by the prices of each individual product(column 2 lines 15-19 and lines 3-10). Braddock does not disclose the method of calculating the net price for an order of different products. Stallaert teaches that a bundle of 100a in which 45 units of asset 1, field 610a, were exchanged for 30 units of asset 3, field 612a, and 22.29 units of currency, field 613a. Multiplying the imputed price of asset 1 by 45 units and subtracting 30 times the imputed price of asset 3 yields a net price that the market participant with respect to bundle 100a must pay of 21.42 currency units (column 12, lines 22 to 28). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Braddock's disclosure with the method of calculating net price from Stallaert. One would have been motivated to make such a modification in view of the method in

Stallaert to reverse the method of calculation to find the price of each order once the net price is known.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to exchange, trading systems in general:

U.S. Pat No. 3,581,072 to Nymeyer

U.S. Pat No. 4,674,044 to Kalmus et al.

U.S. Pat No. 5,92,176 to Keiser et al.

The following patents are cited to further show the state of the art with respect to cost estimating system:

U.S. Pat No. 5,546,564 to Horie

U.S. Pat No. 5,063,506 to Brockwell et al.

U.S. Pat No. 6,226,625 to Levenstein

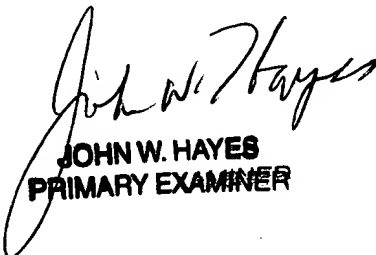
23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rutao Wu whose telephone number is (571)272-9999. The examiner can normally be reached on Mon-Fri 8-5.

Art Unit: 3639

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on (571)272-6708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

rw


JOHN W. HAYES
PRIMARY EXAMINER